# Part I – Introduction and Planning Guidelines

# Introduction

The Taylor Mountain Public Use Plan and Trails Assessment is a partnership planning project between the Washington State Department of Natural Resources (WADNR), King County Department of Natural Resources and Parks (KCDNR&P), and the City of Seattle – Cedar River Watershed. The plan is to review and determine appropriate low-impact recreational opportunities in the greater Taylor Mountain Area. Approximately 54% of the state's population is located within an hour's drive to the planning area. From 1990 to 2000, recreational use at Tiger Mountain State Forest increased 48%. Due to the heavy recreational use at Tiger Mountain State Forest and the public lands located along the entire Mountains to Sound Greenway/I-90 corridor, this study and resultant plan are intended to help disperse recreational use and demand to the south and the east of I-90 and State Route 18 (SR 18). Taylor Mountain is becoming more popular for low-impact recreational use. This plan addresses public use and access concerns, trail conditions and damage to natural resources across the entire planning area and across jurisdictional boundaries. It further addresses existing trail conditions and needed trail improvements, trail circulation issues and ecological impacts of recreational use. This study was funded by an Interagency Committee for Outdoor Recreation - Nonhighway and Off-road Vehicle Activities (IAC – NOVA) Grant

# **Planning Area Description**

The Taylor Mountain Public Use Planning Area is located south and east of Tiger Mountain, south of I-90 and east of SR 18, between the communities of Hobart and North Bend in eastern King County (see Figure 1). The planning area was further divided into two (2) public use zones: Northeast Zone, where the primary management objective (PMO) is for mountain bicyclists, and the Southwest Zone, where the primary management objective (PMO) is for equestrians. However, the trails will be managed either as multiple (equestrian, bike, hike) or shared (equestrian, hike) use trails.

The planning area is 6,203 acres in size, with 2,875 acres in the Northeast Zone and 3,328 acres in the Southwest Zone. The planning area includes portions of Tiger Mountain State Forest and King County Biosolids Trust lands (2,724 acres) that are managed by Washington State Department of Natural Resources (WADNR), King County Natural Lands (Taylor Mountain Forest – 1,800 acres), and a small portion of the City of Seattle's Cedar River Watershed (399 acres), which is located outside the hydrologic boundary designated for water supply. In addition, the Southwest planning area includes land managed by the Cascade Land Conservancy (CLC) with 1,406 acres. Two other property owners, , United Fruit Growers and the US Forest Service own approximately 6,000 acres of the Taylor Mountain area.

All of the lands within the planning area, except for the Cedar River Watershed, are categorized as "working forest" and are managed for the multiple public benefits of forestry, protection of ecological resources, and low-impact recreation. The forested character of the planning area is excellent for the establishment of a local trail system with regional trail connections and for interpretative programs. Hikers, equestrians and mountain bikers currently use the area.

Although equestrians are the primary users of the King County Taylor Mountain Forest lands and mountain bike use is established on three multiple-use trails and on the forest roads located on Tiger Mountain State Forest, this public use plan encourages a multiple-use trail system. Hikers use the trails located within the entire study area. Most of the northeastern lands from the Raging River to Snoqualmie Point have only become publicly owned lands in the past year (2003), with Weyerhaeuser being the previous owner. Illegal use by motorized vehicles and extreme mountain bike courses are some of the existing public use problems.

The low elevation forests are commonly dominated by Douglas fir and are generally harvested on a 50 to 80 year rotation. Most of the land is in its second or third rotation of trees. Each landowner operates under a forest stewardship plan that balances sustainable timber production with conservation and restoration of resources and public use. The Cedar River Watershed is managed under a Habitat Conservation Plan (HCP) and is one of the watersheds managed by Seattle Public Utilities for a clean water supply for the Puget Sound metropolitan area. The planning area includes part of the southwest corner of the Cedar River Watershed, which drains into Issaquah Creek and is primarily managed for watershed, fish and wildlife habitat protection. Recreational use is only permitted if it is consistent with the policies established by the forest stewardship plans and the HCP for the Cedar River Watershed.

The south side of Taylor Mountain contains two main tributary streams, Holder and Carey Creeks, which form the headwaters to Issaquah Creek. The north side of Taylor Mountain contains streams and creeks that are the headwaters of the Raging River. Both watersheds support excellent stream habitat.

The planning area is accessed from several locations. Entrance to the northeast section is from Snoqualmie Point along I-90. The middle of the planning area is accessed from Tiger Mountain Summit along SR 18, which is a "SR pass" between Tiger and Taylor Mountains. The southern area has two primary entrance locations, known as the Hobart or Holder Creek Gate on 276<sup>th</sup> Avenue SE, and the Watershed Gate on SE 208<sup>th</sup> Street. Several other access points start from local neighborhoods.

#### Goals

The goals of the Public Use Plan are to:

- (1) Provide low-impact recreational opportunities for the public, while preserving the site's forestry, ecological, wildlife and water quality values.
- (2) Provide recommendations for a public trail system and facilities within the planning area, which extends from Snoqualmie Point to the north, to Tiger Mountain State Forest through Taylor Mountain Forest, and including a small portion of the Cedar River Watershed outside of the watershed's hydrologic boundary, to the south.

### **Objectives**

The objectives of the Public Use Plan are to:

- (1) Focus on identifying opportunities for trails by using existing forest roads and trails. This will include identifying road to trail conversions, needed new trail construction and trails closures.
- (2) Provide a working document that inventories the trails, analyzes trail upgrades, provides cost estimates and includes a plan for trail maintenance and upgrades to the trail network.
- (3) Address required trailheads and facilities to support public use within the Taylor Mountain planning area.

# **Planning Guidelines**

# **Plan Consistency**

The Taylor Mountain Public Use Plan is bound by the intent and purposes for which the public lands located within the planning area were acquired. The City of Seattle – Cedar River Watershed was acquired by the City in order to have a safe drinking water supply for the greater Seattle area residents. The watershed is managed to best preserve the water source and prohibits public use and access within the watershed boundaries. Exceptions are considered on a case-by-case basis if the proposed public use is located outside of the watershed's hydrographic boundaries and if the recreation system does not encourage entrance into the watershed's hydrographic area. It should be noted that the City of Seattle rarely agrees to exceptions. Moreover, the Taylor Mountain Public Use Plan must be consistent with planning policies and objectives contained in the City of Seattle – Cedar River Watershed Habitat Conservation Plan (HCP)

The area which encompasses Washington State Department of Natural Resources land or managed areas was acquired for working forest purposes. These lands include Tiger Mountain State Forest; Raging River Basin lands; and Rattlesnake Mountain (excluding the Rattlesnake Mountain Scenic Area). These timber lands will be periodically harvested, which could affect trail use (e.g., temporary trail closure during the harvest). Recreational use is allowed in the state forest lands as long as it is consistent with and does not interrupt nor interfere with forest practices. The Tiger Mountain State Forest Management Plan was also used to provide guidance for the planning and recreational use recommendations contained in this document.

The King County Taylor Mountain Forest was acquired to preserve the natural resources located on Taylor Mountain including the headwaters of Issaquah Creek (Holder and Carey Creeks); demonstrate environmentally-sound forest management; flood protection for Issaquah Creek; and provide educational and passive recreational opportunities for the public. Forestry and

recreational uses must preserve the site's ecological, wildlife and water quality values. A Forest Stewardship Plan has been prepared for the site and this Public Use Plan must be consistent with the policies and objectives approved within the Stewardship Plan.

### **Policy Goals**

In order to support and be consistent with the previously approved planning documents for the Taylor Mountain Planning Area, the following goals are incorporated into this plan:

- Demonstrate environmentally-sound forest management;
- Demonstrate the need to preserve the county's forest land for future generations;
- Maintain, enhance and restore sensitive areas and the ecological systems located within the planning area (consistent with existing agency planning goals and objectives);
- Maintain scenic landscapes;
- Enhance opportunities for environmental education; and,
- Provide opportunities for low-impact public recreational use.

## **Planning Principles**

This plan's public recreational use recommendations are based on the goals and strategies contained in previously approved plans and on the conducted Trails Assessment for the area. The Trails Assessment reviewed existing trail conditions and provides recommendations on trail closures, trail rehabilitation, trail reroutes and road-to-trail conversions. The planning principles are included to ensure that the proposed public recreational opportunities are consistent with the previously approved plans and that public use does not adversely affect the natural resources of the area, as follows:

- Public recreational use and educational activities are accommodated where use levels and activities do not conflict with established and approved goals, including:
  - Does not diminish the agency's ability to manage forest resources and lands;
  - Does not diminish ecosystem quality and natural site characteristics;
- Motorized use (e.g., ORV) and access is prohibited;
- Day-use area only, no overnight use;
- Maximum group size is limited to 25 people;
- No major recreational events such as trail runs, poker rides, etc.;
- No firearms are allowed on Taylor Mountain Forest or Cedar River Watershed lands (hunting and fishing on Tiger Mountain State Forest is subject Washington State Department of Fish and Wildlife rules and regulations);
- Dogs on roads and trails only and must be on leash or under voice command;
- Rehabilitate existing damage; and
- Monitor public use levels.

To assist in the development of the public use policies and recommendations for the planning area, a Trails Committee or focus group was formed. The committee included agency staff and public representatives from:

- City of Seattle Cedar River Watershed
- King County Department of Natural Resources and Parks

- Washington State Department of Natural Resources
- Cascade Land Conservancy
- Mountains to Sound Greenway Trust
- Backcountry Horsemen Tahoma Chapter
- Backcountry Bicycle Trails Club
- Washington Trails Association
- Issaquah Alps Trails Club.

Critical issues and questions were posed by the committee that needed to be addressed throughout the planning process and development of the draft Public Use Plan. These questions helped to focus the group on specific issues:

- The agency forest management, stewardship and habitat conservation plans identify ecologically sensitive areas how can public use be best managed in these areas or should public use be prohibited in order to best protect sensitive resources?
- What are the trail connections or public use opportunities, if any, across adjacent privately held lands (e.g., United Fruit Growers)?
- How much public use can be accommodated in this area? Will increasing public use opportunities help to offset the public's recreational needs along the Mountains to Sound Greenway/I-90 corridor?
- Which types of recreational opportunities and facilities are needed to accommodate the public use?
  - Are there enough trails? Are there too many trails? Should the trails be single, shared or multiple use trails?
  - What are the appropriate trail connections between public lands?
  - How many trailheads are required to accommodate the desired level of use?
- What are the potential funding sources to implement the public use plan?

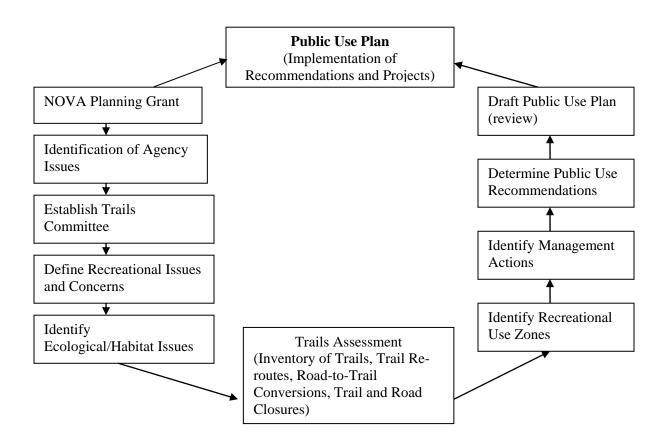
These critical questions are addressed in the following chapters of the public use plan and are represented in the outcomes and recommendations.

# **Preparation of the Plan**

Interagency discussions, including representatives from King County, Seattle Public Utilities and Washington DNR, were convened in 2002 to discuss Taylor Mountain Forest management and how this would affect adjacent lands. From these discussions it became apparent that public use occurs throughout the area and that planning should span these different jurisdictional lands.

The planning effort for this public use plan started with King County Department of Natural Resources and Parks staff completing a three month Trails Assessment to study current trail conditions, to locate new trails where necessary, and to determine road-to-trail opportunities. The results are presented in the trails assessment section of this document (See Trails Assessment). To assist in the planning effort, a Trails Committee was established that included land managers and public use groups and organizations. The committee helped develop the set of recommendations and policies for public use of the planning area. This is presented in the recommendation section of the document.

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### **Public Use Plan Review**

Upon completion of the draft plan, it was distributed to the established Trails Committee and to interested citizens and organizations. A public meeting was held August 17, 2004 in order to receive public comments. The final plan was submitted to the City of Seattle – Watershed Management Division; King County – Department of Natural Resources and Parks; and the Washington State Department of Natural Resources.

The recommendations contained in the plan will be reviewed as necessary to ensure that they reflect the changing needs of the public and the purposes for which the Taylor Mountain Forest area was acquired. Monitoring of trail use and conflicts between user groups is addressed in the plan. Public comment will be sought as major changes to the plan become necessary.

# Part II – Natural Resource Analysis

# **Natural Resource Analysis**

This section summarizes the existing conditions of the site including soils and topography, aquatic resources, and fish and wildlife (See Figure 2). For more comprehensive and detailed background information see the King County Taylor Mountain Forest Stewardship Plan (2003); Washington State Department of Natural Resources Tiger Mountain. State Forest Management Plan (1986); King County/Washington State Department of Natural Resources Rattlesnake Mountain Scenic Area Management Plan (1998) and City of Seattle-Cedar River Watershed - Habitat Conservation Plan.

# Soils and Topography

Elevations within the Taylor Mountain planning area range from 500 feet to 2,600 feet at the top of Taylor Mountain. Topography on the site varies widely, from relatively flat to slopes over 45%. Steep areas occur along hilltops and ravines. Where the ground is relatively flat, either wetlands or streams and floodplains tend to occur. Most of the site is composed of steep tertiary bedrock (including coal-bearing Puget Group rocks) protruding from glacial till.

Erosion is a concern from disturbance of the glacial-ice contact soils on steep slopes. Over 75% of Taylor Mountain and Tiger Mountain are classified as an Erosion Hazard Area according to King County Sensitive Areas Folio (1990). These erosion prone soils can limit the options for public use.

Major soil types: Chuckanut, Tokul, Beausite, Blethen, Rober, and Pilchuck are present in the area. Other soil types present to a lesser degree include the Blethen, Elwell, Tokul-Pastik, Ragner-Indianola, Everett, and Puyallup. These soil types are good to excellent tree growing soils.

One area of Taylor Mountain Forest is recognized as a Coal Mine Hazard Area (King County Sensitive Areas Folio, 1990). This area is located in the northwest part of the county forest and is characterized by abandoned coal mine workings such as tunnels and air shafts.

Two areas located within the planning area are shown as Landslide Hazard Areas in the King County Sensitive Areas Folio (1990). One area is located along SR 18 near Holder Creek. The Washington State Department of Transportation (WSDOT) has constructed a bridge in this area to deal with the landslide hazard. The other area is located along SR 18, south of I-90 and near the Raging River and Deep Creek.

# **Aquatic Resources**

The Taylor Mountain planning area contains significant freshwater aquatic resources from rivers, creeks, streams, forested wetlands, wetlands to bogs. These resources provide a variety of functions from wildlife habitat to preserving water quality.

### **Hydrology, Streams and Water Quality**

The south and east sides of Taylor Mountain contains two streams, Holder and Carey Creeks that form the headwaters of the Issaquah Creek drainage basin, whereas the north side of the mountain drains into the Raging River drainage basin (See Figure 2). The Issaquah Creek Basin encompasses about 61 square miles starting from steep headwaters in its southern basin that drain north into Lake Sammamish. Two major tributaries to Issaquah Creek, Holder and Carey Creeks, are located within the Taylor Mountain Planning Area. The Raging River Basin is approximately 35 square miles in size, with the headwaters located southeast of the planning area. A major tributary, Deep Creek, flows from Tiger Mountain along SR 18 between Tiger Mountain and Taylor Mountain into the Raging River.

Holder Creek originates on Tiger Mountain State Forest and enters the northwest corner of the planning area, flowing under SR 18 in a southwesterly direction. It flows through a steep ravine and leaves the site at the Issaquah-Hobart Road. Holder Creek is approximately seven miles in length and flows into Carey Creek about one-half mile downstream (off-site). At the confluence of the two creeks, they form Issaquah Creek.

In many places along Holder Creek, the stream has cut into the banks, resulting in erosion and sedimentation of the streambed. During relatively dry weather, the waters of Holder Creek are generally clear. However, during wet periods, the waters carry large amounts of sediments from erosion that occurs throughout the drainage. Twice in the past ten years, flood damage has been recorded due to beaver dam blowouts on a Holder Creek tributary, which resulted in massive erosion in a section of Holder Creek. However, the general water quality for Holder Creek is high.

Carey Creek originates on the southern slopes of Taylor Mountain and flows through the site for nearly five miles. It becomes Issaquah Creek at its confluence with Holder Creek. The perennial headwaters of the creek are located within a beaver pond complex, located on the Cascade Land Conservancy lands. There is a 40-foot tall waterfall or cascades located in the Cedar River Watershed that limits anadromous fish use in upper Carey Creek.

Carey Creek's water and habitat quality is high with good bank stability and good streambed structure. To keep water from the old town of Taylor out of Seattle's drinking water, the Taylor Diversion Ditch was created. During flood events, water from Hotel and Webster Creeks overflows into Taylor Ditch, bringing high flows and sediment into Carey Creek. This has resulted in increased stream flows causing major erosion and flooding. Overall, the system is recovering from these depositional, flooding and erosional events.

The Raging River headwaters begin at the top of Rattlesnake Ridge, southeast of the planning area and flows north under SR 18 at the base of Taylor Mountain, about 1.5 miles south of I-90 (See Figure 2). Everything south of I-90 is considered the Upper Raging River Basin. In this area the Raging River flows through a rural residential area before entering Tiger Mountain State Forest. Deep Creek is a major tributary to the Raging River and starts just south of this

residential area. Deep Creek is located along SR 18 near the Tiger Mountain Summit Parking area and travels along SR 18, crossing SR 18 in several places.

The Raging River's water and habitat quality are good. A significant portion of the watershed lies in the rain-on-snow zone that results in low flows and increased peak flows. It carries a large amount of sediment. It is covered mostly by second-growth forest and generally has healthy riparian corridors.

#### Wetlands

The Taylor Mountain Planning area includes more than 100 wetlands, which provide fish and wildlife habitat and important flood storage and discharge capacity. Past forestry operations, causing soil compaction and excavation, have disturbed a majority of the wetlands on site, altering water flow and leading to the enlargement or reduction of wetland size.

Most of the wetlands are shrub-scrub wetlands dominated by salmonberry, red-osier dogwood, red elderberry, vine maple and red alder. The forested wetlands on site are typically vegetated by red alder, black cottonwood, and western red cedar. Emergent wetlands on-site consist of sedges, grasses, lady fern, waterleaf and skunk cabbage.

Within the Holder Creek drainage, two wetlands in particular possess unique attributes and are of high quality. They are located in the headwaters of Holder Creek and are disconnected by a roadway located between them. Both wetlands provide key functions of flood storage and sediment filtration to lower Holder Creek.

In the Carey Creek Basin, drainage seeps and steep slopes have created many locally wet areas. Three wetlands of particular interest are in the headwaters of Carey Creek: one is the only wetland containing a sizable cattail marsh; the second is an open water pond created by a beaver dam; and, the third is identified as a bog and is the only one onsite that contains sphagnum moss.

Only a few wetlands have been identified in the Raging River Basin in the planning area. The largest one is near I-90 and SR 18 and it is covered mostly by hardhack.

#### Fish and Wildlife

Large tracts of undeveloped land provide habitat for fish and wildlife. Such habitats are key to maintaining biological diversity and protecting native fish and wildlife populations. Because of the planning area's large size, it provides high quality habitat function and is an ecosystem of significance due to its variety of key habitat types.

### **Fish**

The decline of Chinook and bull trout in the Puget Sound has caused these species of salmonids to be listed as threatened under the Endangered Species Act in 1999. The listing has brought additional focus on the need to conserve habitat for these and other salmonid species.

The abundant populations of salmon and trout distinguish Issaquah Creek as one of the most significant basins in King County. Both Holder and Carey Creeks provide high quality spawning and rearing habitat for six species of salmonids (steelhead, coho, chinook, sockeye, sea run and resident cutthroat trout, and char) (King County Department of Natural Resources, 1996). Upstream of the cascades to the headwaters, only resident cutthroat trout are found. The Taylor Mountain Forest represents one of the most abundant and relatively undamaged habitats for salmon and trout in the entire Issaquah Creek basin (King County Department of Natural Resources, 1996). Within Taylor Mountain Forest, deteriorating forest roads, unimproved trails, stream bed and bank damage and culvert failures are the most serious causes of fisheries habitat decline.

The Raging River and Deep Creek contain excellent coho habitat. In addition, chinook, steelhead, and cutthroat trout are in the system. The riparian buffers have helped protect the fish habitat during the recent timber harvests. Snow-on-rain events move a lot of sediment through the area and result in providing abundant spawning gravel in the Raging River.

#### Wildlife

Taylor Mountain provides a variety of habitat functions, including its role as a refuge for a variety of wildlife populations and as a migratory corridor for birds and larger mobile species. Wildlife species that are generally absent from developed areas are present at Taylor Mountain. Black bear are commonly seen and cougar are known to inhabit and den on the site and surrounding lands. Both use the site as part of a large foraging territory. Taylor Mountain also supports elk, deer, and medium and small mammals such as raccoons, coyotes, long-tailed weasels, foxes, skunks, voles, chipmunks, rabbits, squirrels, and opossums. The mature coniferous stands provide habitat conditions for cavity nesting birds such as hairy woodpeckers, pileated woodpeckers, brown creepers and western screech owls. Numerous other bird species are present in the area.

Within this area, the bald eagle is the only terrestrial wildlife species listed as threatened under the Endangered Species Act and is known to occur on Taylor Mountain. While no bald eagles are known to nest or winter roost on the property, they have been observed overhead. It is unlikely that other listed wildlife species such as the marbled murrelet, northern spotted owl and peregrine falcons will be found on site due to the lack of adequate habitat. Several priority species of local importance, as identified in the King County Comprehensive Plan (2000), are present in the area, including the red-tailed hawk, pileated woodpecker, band-tailed pigeon, wood duck, red-legged frog, western toads, beaver, Columbia black-tailed deer and elk.

The diversity of wetlands, seeps and streams on the site, together with forested upland habitat, provide for a variety of amphibian species, including salamanders, frogs and toads. Eight species have been observed on the Taylor Mountain Forest. Present on the site is the rare western toad (*Bufo boreas*), which is listed as a species of concern by the U.S. Department of Fish and Wildlife (Jones and Stokes, 1999).

# **Corridors and Habitat Connectivity**

Wildlife corridors are used by animals to move through the landscape. King County has addressed the need for habitat networks in the King County Comprehensive Plan (2000). The Taylor Mountain Planning area provides an obvious and crucial connection between the City of Seattle Cedar River Watershed, Tiger Mountain State Forest, and the neighboring forestlands. Portions of the Holder, Carey and Raging River Creek corridors have been identified as part of the wildlife habitat network in the Comprehensive Plan.

Wildlife is expected to move across Taylor Mountain relatively freely, with no apparent barriers or constrictions except for SR 18. The network of trails and forest roads is likely to be used extensively by wildlife, with movements concentrated along streams and wetland complexes. The primary barrier constricting wildlife movement is SR 18. Wildlife mortality is significantly increased by attempts to cross the highway. WSDOT is currently planning to widen SR 18 in this area. It is recommended that wildlife crossings be included as part of the widening project.

# Part III - Public Use Analysis

# **Public Use Analysis**

This section summarizes the historic and existing public use of the planning area including cultural, historical resources and scenic landscapes. For more comprehensive background and detailed information see the Taylor Mountain Forest Stewardship Plan (2003); Tiger Mountain State Forest Management Plan (1986); and the Rattlesnake Mountain Scenic Area Management Plan (1998).

#### **Historic Use and Cultural Resources**

Taylor Mountain Planning Area is part of the history of Hobart, Snoqualmie, and North Bend and other interesting former communities located nearby. The most visible remnants from the past are the railroad grades and large first-growth stumps with springboard notches.

The site was likely used by the Snoqualmie, Duwamish and Muckleshoot Indians for fishing, hunting and gathering and as a major transportation link from Lake Sammamish to the Cedar River and across the Cascades.

Government Land Survey notes from 1891 and 1892 describe the area as "...covered with heavy Fir, Hemlock, Cedar and Spruce timber of good quality... A very dense undergrowth throughout..." Also noted were numerous brooks, creeks and "branch springs". The Taylor Mountain Forest was also the location of at least one home-site, most likely the Knott family farm, and a large dairy farm. More than 60 settlers homesteaded in the vicinity at this time, many clustered around nearby Walsh Lake.

Logging was extensive throughout the area since the late 1880's. Logging was first accomplished with oxen, horses and steam donkeys. Construction of a railroad allowed for more intensive harvesting. Eventually 15 miles of standard-gauge rail passed through the forests and to the top of Tiger Mountain. Several sawmills operated in the area. The Sherwood Mill, was located on upper Carey Creek in the 1930s, probably milling cedar bolts cut from the large cedar stumps left standing in wet areas after the initial harvest.

Taylor Mountain continues to be harvested to the present day. Most of the previous Weyerhaeuser section located within the northern portion of the planning area has been logged in the past ten years. These cut areas have been replanted with Douglas fir. Timber harvests on Tiger Mountain State Forest are managed on an area based sixty (60) year rotation, where approximately 1/60<sup>th</sup> of the forest will be cut each year. In the last ten (10) years, there have been approximately 650 acres cut as regeneration harvests and approximately 230 acres of forest thinned. The timber cuts have ranged in size from ten to seventy (10 to 70) acres. These areas have been replanted predominantly with a mix of Douglas fir and western red cedar species.

# **Scenic Landscapes**

Taylor Mountain is part of the "Issaquah Alps," a valuable scenic resource visible from public highways, open spaces and a large number of residences in surrounding towns and unincorporated King County. The vegetation, topography and creek drainages create a natural appearance. The nature of the forest creates an environment with a high probability of experiencing solitude, closeness to nature, tranquility, self-reliance and challenge.

The rise in elevation affords spectacular views in all directions. Southern views from Taylor Mountain take in the Enumclaw Plateau, buttes, Cascade Range foothills and Mount Rainier. Views to the west look over the Cedar River valley toward Puget Sound. Views from the top of Taylor Mountain include Mount Si, Cascade Range foothills, Mount Rainier, and when looking toward Puget Sound, the cities of Bellevue and Seattle. Views from the ridge top in the northeast portion of the planning area include Seattle, Bellevue, Tiger Mountain, Mount Si, Snoqualmie Valley and Rattlesnake Mountain.

# **Existing Public Use**

The present recreational use is focused in three areas, Taylor Mountain Forest in the southeast, Tiger Mountain State Forest in the northwest, and Snoqualmie Point/Rattlesnake Mountain to the northeast. This planning study looks at connections between these areas. In the southwest, recreational use of the site is predominately equestrian, with some use by hikers, runners, and mountain bikers. Use at Tiger Mountain State Forest includes mountain bikes, hikers, runners, and equestrians. Snoqualmie Point is the western point of the Rattlesnake Mountain Trail, a pedestrian only route along the ridge of the mountain. Illegal use by off road vehicles (ORVs) including motorcycles or all-terrain vehicles (ATVs) occurs mostly on the privately owned forest lands located east of SR 18.

Information on recreational use of the site was collected in 1999 and 2002 for Taylor Mountain Forest for the Forest Stewardship Plan, for Tiger Mountain State Forest in the Forest Management Plan, and for Snoqualmie Point during the Rattlesnake Mountain Scenic Area Management Plan in 1998. Additional information has been collected by meeting with user groups in the area, including the Friends of Taylor Mountain, Tahoma Chapter of the Backcountry Horsemen, Backcountry Bicycle Trails Club, Issaquah Alps Trails Club, Washington Trails Association, and Mountains to Sound Greenway Trust, and local users. A trails committee with a representative from each of the above groups and agencies has been meeting and providing direction for the development of this public use plan.

Equestrians ride throughout the area year-round, both on short trips and on all day outings. Trips can occur just on Taylor Mountain Forest or through the planning area to other properties, including the Cascade Land Conservancy and United Fruit Growers lands to the north and the City of Seattle's Cedar River Watershed properties located outside the hydrologic boundary of the watershed to the southwest.

Hikers and joggers mostly use the existing roads because the trails are extremely muddy on Taylor Mountain Forest. Running clubs and cross-country teams also occasionally utilize the

roads for their workouts. Most hikers are on informal hikes, but the Issaquah Alps Trails Club occasionally leads hikes in the area. Mountain biking is also mainly located on the road system due to the existing conditions of the trails. Several individuals use the site for more than one activity.

Additional low-impact recreational opportunities are considered necessary along the Mountains to Sound Greenway (MTSG)/I-90 corridor. The project planning area is located within the Puget Sound metropolitan area service area. The metropolitan area includes more than three million people, which is approximately 54% of the state's population. SR 18 and I-90 provide easy and relatively fast access to the project planning area and the Taylor Mountain planning area is generally located within a 60-minute or less drive from most of the metropolitan area.

Moreover, public recreational use at Tiger Mountain State Forest has increased 48% in the past ten years, and due to population pressures, use is expected to continue to increase over the next ten years. This increased demand is also apparent on all of the public lands and trails located within the MTSG/I-90 corridor.

The agencies with public land management responsibilities located within the MTSG/I-90 corridor are actively trying to address the recreational demand within the corridor. The agencies, in partnership, have identified proposed recreational facilities to help meet the recreational demand. Within the project planning area, the state Department of Natural Resources and US Forest Service have partnered for the planning of a trailhead located at Snoqualmie Point. The state Department of Natural Resources manages the Summit Trailhead on SR 18, which provides parking facilities for the trail system located on the southern portion of the state forest. With implementation of the project proposals contained in this public use plan, it is anticipated that the Taylor Mountain area will help meet these increasing recreational demands.

#### **Trail Conditions**

There are many miles of trails and roads identified in the planning area (See Figure 3). Trail conditions vary, with trail tread varying from 18 inches to eight feet. On Tiger Mountain, three trails have had extensive hardening work to accommodate multiple recreational use activities (predominantly mountain bicycles). Equestrians have been working on several trails on Taylor Mountain Forest to eliminate muddy conditions. Many trails traverse wet areas and have muddy sections, and several trails cross streams without culverts or bridges ("wet-crossings").

#### **Trails Assessment**

The state Department of Natural Resources and King County obtained a Nonhighway Off-road Vehicle Activities (NOVA) grant from the Interagency Committee for Outdoor Recreation (IAC) for the preparation of the Taylor Mountain Public Use Plan. A Trails Assessment was included within the scope of the plan in order to verify the trail inventory, existing trail conditions and include proposed trail closures, proposed trail reroutes, proposed road-to-trail conversions, and road closures within the planning area. However, although located within the public use plan project area/boundary, some trails and roads located on adjacent private lands were not inventoried or documented in this plan due to lack of time and funding, and that the private

landowners did not provide permission for the inventory. In addition, because the planning area trails are currently subject to seasonal trail closures, the assessment identified trail construction needs in order to provide a year-round trail system for equestrians, mountain bicyclists and hikers. (See Summary Table and Trails Assessment.)

# **Summary of Taylor Mt. Trails Assessment**

Trail #	Trail Name	Trail Length (ft)	Trail Condition	Amount of Trail > 15 %	Notes
2	Holder Ridge	4,769	poor	23	Steepest trail observed, sections over 40% slope Mud along old road grade, Reroute
3		1,291	poor	27	Trail around pond, steep and flooding issues Recommend to close
4	Canyon	3,075	poor	36	Very steep, lots of erosion into Carey Creek Closed in 2004
4	Boot	1,509	good	3	Trail has been harden and should stay open
8		2,265	poor	34	Standing water on 8% of the trail, stream crossing, Recommend to close
8		2,343	poor	41	Standing water on 5% of the trail Recommend to close
9	Hermit	3,058	fair	7	Standing water on 5% of the trail, reroute steep and wet portions Trail 9 reroute to connect between Roads H & P, replaces Trail 8
9a		900	poor	43	Close and remove, not used a lot and duplicates road
10	Lower Highway	2,030	poor	31	Steep slope with erosion, and flat area collects water
					Recommend to close, use road to upper trail 25
11	Carey Creek				
	A - Watershed	1,804	fair	0	Need to be harden and a bridge crossing for Carey Creek trib.
	В	4,402	good	3	Needs water bars and hardening, mostly in good shape
					Monitor stream crossing to determine if needs a bridge
	C - west of	3,086	poor	8	Standing water on 16% of the trail, steep slopes on each end
	Road F				Recommend hardening and water bars
13	Sherwood	2,126	poor	63	Steep and bermed in sections with no drainage, highly eroded
	A 1.14 EU	4 470		00	Add drainage, trail to steep to allow bike use
14	Add to Elk Ridge	1,172	fair	20	Needs water bars and hardening, view of Mt. Rainier Reroute 230 feet of steep grade
18	Boot	1,770	fair	10	Short section needs to be rerouted and harden to reduce slope, the rest of the trail is in good shape
19	Elk Ridge	2,628	poor	50	Steep and standing water over 8% of the trail, hazardous stream crossing Recommend a reroute

Trail #	Trail Name	Trail Length (ft)	Trail Condition	Amount of Trail > 15 %	Notes
19	Elk Ridge	3,154	good	7	Needs short reroute and some hardening over upper section, scenic trail
31	short cut to Elk Ridge	1,113	poor	52	Steep grade, excessive erosion, recommend to close
31	Watershed Road	2,421	poor	0	Follows old road bed, thick salmonberry is naturally revegetating it, recommend to close
31	Α	1,442	fair	0	Reroute first 250 feet of trail for drainage, close reroute for downed trees(D)
31	A1	364	good	0	Leads to road
23	Holder Creek	6,446	poor	25	Very poor Holder Creek crossing, steep grade depositing silt into stream Recommend a reroute
25	Upper Highway	2,936	poor	13	Crosses wetland, steep in sections, recommend a reroute
26	Carey Creek Connector	2,556	fair	25	Steep section of highly eroding sandy soils, some hardening and drainage features in upper area, recommend steep sections be rerouted
	Log Crossing	3,728	fair	12	Roughed in seldom used hiking trail, old growth log crossing Closed in 2004
	Kneeknocker	1,898	poor	47	Very steep and in poor condition, recommend reroute and new trail to connect CLC land
Tiger Mt	to Snoqualmie	Point			
East Side	to Raging River	5,363	poor	41	Portions are in cobble, steep slopes, poor stream crossing of Deep Creek
	Road 7000				Recommend a major reroute to connect to NW Timber trail
Raging R.	to Snoq. Point	22,990	fair/poor	34	No river crossing, needs bridge, steep slopes adjacent to river,
					beneath power line
New	Beaver Pond Carey-Holder Co	onnactor			
	Holder Knob				Note: Readers are referred to Figure 1 of the Taylor Mt. Forest Stewardship Plan to see the locations of trail numbers.

King County Department of Natural Resources and Parks staff conducted the Trails Assessment by walking and inventorying the existing trail system with a measuring wheel, a clinometer, and a tape measure. Conditions of the trail were noted, including: the length of the trail; the width of the trail tread; the length of trail structures, such as turnpike; and if the trail followed an old railroad bed, the width of the bed was also noted. Trail tread conditions were also evaluated including: tread firmness; the degree of erosion; muddy sections and standing water were measured; and, impediments, such as cobbles, mud or roots.

Special attention was also noted if a trail came within close proximity to wetlands and streams and the potential adverse impact the trail could have on them. The approved Taylor Mountain Stewardship Plan primary goal is to preserve and enhance water quality as a means to protect wildlife habitat and overall forest health. Trail approaches leading to creeks and the condition of the streambed were assessed as was the degree of siltation caused by the lack of drainage structures and steep slopes on the trail. A lack of ability to retain soil in the trail tread and close proximity to these environmentally sensitive habitats were the reasons to close or reroute a trail.

New trail and re-routes were designed to meet King County and state Department of Natural Resources trail standards, including the provision of an appropriate grade; good drainage; minimizing the risk of erosion; protection of water quality; and, adding visual/scenic variety, where possible. Stream crossings were avoided, but where needed, either a bridge is recommended or "wet-crossings" were selected where the approaches on both banks were at a moderate grade and the streambed is flat with a firm rocky base.

#### **Seasonal Trail Closures**

Recreational use occurs year round, however trails have been closed seasonally between October 15<sup>th</sup> and April 15<sup>th</sup> at both Taylor Mountain Forest and Tiger Mountain State Forest (multiple use trails only) to support the ecological goals for the area. Trail closures provide protection of fish and wildlife habitat and forest health from soil erosion due to trail use during the winter rains. Seasonal trail closures also improve water quality by reducing sediment in the runoff helping to protect salmon spawning in the streams during the winter. However, with the implementation of trail tread hardening, the seasonal closure may be reduced or eliminated if conditions allow.

#### Access

Currently there are two informal parking areas and access points to the Taylor Mountain Forest. Most equestrians, with horse trailers, park and access the site at the Cedar River Watershed gate located on SE 208<sup>th</sup> Street, referred to as the "Watershed Gate." Up to 14 horse trailers have been observed in this area, with an occasional hiker or biker also leaving from this point. The other informal parking and access, the "Hobart" or Holder Creek Gate is located at on 276<sup>th</sup> Avenue SE, just south of the SR 18/Issaquah-Hobart Road Interchange. Hikers, mountain bikers and equestrians use the parking lot created in the road right-of-way, just outside the gate. Up to 10 vehicles have been observed at this location.

Most mountain bikers park at the Tiger Mountain Summit Trailhead and use the Tiger Mountain State Forest multiple use trails and forestry road system. Most do not cross SR 18 and travel

south to Taylor Mountain Forest. Hikers and mountain bikers are also accessing the planning area from the "Hobart Gate." In the Hobart area and local neighborhoods, hikers, equestrians, and bikers access the site at various entry points, including the old railroad grade on the western boundary off of SE 208<sup>th</sup> Street and through the gate at 298<sup>th</sup> Ave. SE. At the very north end of the planning area, the US Forest Service and WADNR are currently in the planning stage for the development of a trailhead at Snoqualmie Point.

### **Environmental Education**

The current level of environmental education occurring at Taylor Mountain Forest is limited. Occasionally the Mountains to Sound Greenway Trust and the University of Washington Forestry Department have brought classes to the site to study the streams and forest. The site has also been used for wetland monitoring by the Sammamish Basin Community Link Project. This group of volunteers was educated about wetlands characteristics and consequently monitored a Holder Creek wetland. With a formal trailhead and interpretive trails, environmental education opportunities will increase.

# Part IV- Public Use Recommendations

# **Public Use**

This section presents a series of recommendations for low-impact recreational opportunities within the Taylor Mountain planning area. The recommendations include management prescriptions for roads and trails, trailheads, recreational facilities, land use considerations and environmental education. These recommendations were developed with the help of the Trails Committee and key citizens.

# **Public Use Zones Summary – Southwest and Northeast Zones**

The Taylor Mountain planning area contains many sensitive resources that can be adversely affected and damaged by unregulated recreational use. Recreational use is limited to the identified trail system and off-trail use is strictly discouraged. Because multiple use trails are currently planned for the area, it was determined that primary use zones and trail objectives should be identified within the planning area.

The two zones, Northeast and Southwest, identify the primary management objective strategies (PMO) for trail use (See Figure 1). The trails located in the Northeast Zone, from Snoqualmie Point/Rattlesnake Mountain to Tiger Mountain Summit, were identified with a PMO for mountain bicyclists. The trails located in the Southwest Zone, Tiger Mountain Summit to Taylor Mountain Forest, are managed with equestrian use as the PMO. The trails located within the Cedar River Watershed are limited to equestrian and hikers because of the City of Seattle – Cedar River Watershed's existing management policies. Access to, and use of, trails on City of Seattle lands is subject to yearly review by Seattle Public Utilities. Future changes in land use may necessitate changing use or restricting access to areas that are currently open. The City of Seattle reserves the right to close or reroute any trails if necessary to protect public health or the security of the Cedar River Watershed.

Although the PMO may identify equestrians or mountain bicyclists as the primary users, the trails will be built as multiple use trails so that the other users, hikers and/or equestrians and mountain bicyclists can use the trails. In order to maintain a multiple-use trail system and reduce user conflict, trail users must follow good trail etiquette, which has been promoted and supported by the International Mountain Bicycle Association (IMBA), Backcountry Horsemen, Washington Trails Association and many other user groups and organizations. In brief, the IMBA Multiple Use Trail Guidelines sign shows mountain bicyclists yielding to equestrians or hikers (slow, stop or even dismount); hikers yield to equestrians (step off the trail on the downhill side); and equestrians have the right of way (but must have their horses and stock under control). (For more details, see Appendix A: Trail Etiquette and Courtesy.)

# **Public Use Descriptions**

#### Trailhead Areas

Trailhead areas should be suited for concentrated public use and facilities and should be highly maintained, Americans with Disabilities Act (ADA) accessible and provide well-defined access points to enter the Taylor Mountain planning area.

Recreational users and visitors will enter the Taylor Mountain area either through a trailhead or neighborhood access point. However, public use will be directed to one of the regional trailheads. The proposed trailheads are located on the periphery of the planning area and are close to either a county road or state SR in order to facilitate easy access to the site, safety, monitoring, enforcement, and maintenance efficiencies. The proposed sites are also located where there are few environmental impacts and where underlying characteristics, such as soil, slope, drainage and vegetation can support the concentrated use. These proposed trailheads shall be designed to meet county, state and federal ADA and trailhead design standards.

Generally these proposed trailheads may include parking areas, restrooms, information boards and public information kiosks, picnic areas, barrier free connector and loop trails, equestrian facilities, and interpretive and environmental education signs.

#### **Trails**

The trails within the planning area are designated either multiple use, with a primary management objective (PMO) for either equestrians or mountain bicycles, or shared use, with a PMO for equestrians. Hikers are allowed on all the trails. Because of limited agency budgets, the agencies will work with the respective trail groups and organizations on trail construction and maintenance activities. Currently the trails are closed seasonally (Oct. 15<sup>th</sup> through April 15<sup>th</sup>) because of poor trail construction, tread and muddy conditions. Due to the poor condition of the trails, the trails cause sedimentation and erosion into nearby wetlands and water courses and raise public safety concerns. The agencies will work with the trail groups and organizations to renovate, reconstruct or construct new trails (re-routes), where identified, in order to decrease the seasonal closure and open the trails year round.

#### **Northeast Public Use Zone**

The Northeast Public Use Zone was identified as the area from Snoqualmie Point/Rattlesnake Mountain to the Tiger Mountain Summit (See Figure 1). The Primary Management Objective (PMO) for the proposed multiple use trails in this area is for mountain bicycle use, but also include equestrian and hikers use. Because of the established PMO for mountain bicyclists, the recreational user to the area can expect a high amount of social interaction with mountain bicyclists. Pets on leash or under voice command can also be expected on these trails.

#### **Southwest Public Use Zone**

The Southwest Public Use Zone was identified as the area from Tiger Mountain Summit to Taylor Mountain County Forest and Cedar River Watershed – southwest corner (outside the hydrographic boundary) (See Figure 1). The Primary Management Objective (PMO) for the trails located in this zone is for equestrians. The trails located from the summit and within the King County Taylor Mountain Forest are generally multiple use trails with a couple of shared use trails located on very steep slopes. The trails located within the Cedar River Watershed portion of the study area are shared use. These shared use trails are equestrian and hiker only. The Cedar River Watershed does not allow mountain bicycling within any of the lands under their management. Pets on leash or under voice command can be expected on these trails.

# **Specific Recommendations**

### **Public Use Management**

This section provides recommendations and findings to help achieve successful public use and management within the Taylor Mountain Planning Area. Categories are: Stewardship; Enforcement; Recreational Facilities (e.g., trailheads, trails and roads); and, Agency/Land Management.

### 1. Stewardship Recommendations

- a. *Public Use Zones*. Implement primary management objective (PMO) user group zones: equestrians south of Tiger Mountain Summit (Southwest Zone) and mountain bikes northeast of Tiger Mountain Summit (Northeast Zone). Mountain bike use will be prohibited on several trails based on very steep slopes/trails where there is no ability to relocate the trail and due to City of Seattle Cedar River Watershed's policy prohibiting bikes in the watershed.
- b. *Stewardship Goals*. Work with all of the recreational user groups to achieve stewardship goals for Taylor Mountain Forest, as follows:
  - i. Conserve, protect and restore the natural resources inherent in the land and water;
  - ii. Restore the health and diversity of the forest and to demonstrate environmentally sound forest management and the importance of conservation of the county's forest land; and.
  - iii. Provide educational and passive recreational opportunities for the public, while preserving the site's ecological, wildlife and water quality values.
- c. *Seasonal Closures*. Seasonal closures shall continue to be in effect until the trails can support decreased seasonal closures or year-round use. Trails in good or excellent condition will remain open and others will be seasonally closed. Forest roads will remain open to non-motorized recreational use year-round.
- d. *Volunteer Coordination*. Expand the volunteer trail maintenance program to increase stewardship of the area. Continue to work with the Backcountry Horsemen Tahoma Chapter, Washington Trails Association, Backcountry Bicycle Trails Club, Mountains to Sound Greenway Trust, and Issaquah Alps Trails Club to assist with trail maintenance and construction projects.

- e. *Preserve Cultural and Historic Resources*. Partner with the tribes and historical groups to gain greater understanding of cultural and historical places. Protect these sites from intrusions, where necessary.
- f. *Environmental Education*. Enhance opportunities for environmental education and interpretation of the area's cultural, historical, and natural systems and restoration processes initiated at the site. The educational information will be included on interpretive signs; kiosks; information boards; and, brochures, if feasible. In addition, the land's long-term goals and practices for forest stewardship will also be interpreted, including forest health and forest management, salmon habitat and watershed awareness.
- g. Continue the Trails Committee. Maintain the Trails Committee with members from the land management agencies and non-motorized user groups/organizations (equestrians, mountain bicyclists, and hikers) to discuss funding and management issues as they arise. The committee should meet at least once a year (or more often as the committee deems necessary).
- h. *Monitoring of Trail Use and Conflicts*. The Trails Committee will review any reported conflicts between user groups (equestrians, mountain bicyclists, and hikers). The committee will also monitor trail conditions and provide feed-back to the land managers whether trail closures may or may not be required. In an attempt to reduce trail conflicts, the committee will develop and provide brochures, signs and classes, if necessary, regarding trail etiquette and courtesy for the sharing of trails.
- i. *Pets in the Planning Area*. Pets must be on leash or under voice control at all times. Pets are only allowed on the trails and roads. Pets are not allowed to run free in the woods or to harass fish and wildlife. Pets and their owners are subject to the King County Animal control rules for rural King County lands. Pet owner education will be posted at the trailheads and at other key access points to the Taylor Mountain area.
- j. *Hunting and Fishing*. Firearms are prohibited within the King County and City of Seattle owned and managed lands. Washington State Department of Natural Resources managed lands are open to hunting and fishing and are subject to Washington State Department of Fish and Wildlife rules and regulations.
- k. *Noxious Weed Control*. It is important not to spread invasive weeds with new trail construction. Trails will be monitored and action taken to remove any noxious weeds.

#### 2. Enforcement Recommendations

- a. *Trail Rules, Regulations and Etiquette*. Education on trail rules, regulations and etiquette are critical for the use and sharing of multiple use trails. If all users follow the rules, regulations and etiquette, the need for enforcement actions are reduced. (See Appendix A: Trail Etiquette and Courtesy.)
- b. *Volunteer Trail Rangers*. Increase user knowledge of rules, regulations and etiquette by using trained volunteers to provide information. Recruit more King County Program Park Ambassadors and volunteers willing to put in over 100 volunteer hours per year to educate the public about the area, trail use and trail etiquette. Recruit horse and mountain bicyclists to provide patrols equestrians would patrol the Taylor Mountain Forest and mountain bicyclists would patrol the northeastern project planning area. Volunteers would also be a "presence" to help with controlling illegal use by off road vehicles (ORVs and/or ATVs).

- c. *Enforcing Key Rules*. Enforcing the key rules for the area, for example: no motorized use; day-use only; stay on trails and roads; and, dogs on leash or under voice command and restricted to trails and roads.
- d. *Law Enforcement*. Submit grant applications or look for other funding mechanisms for the funding of a law enforcement position for the area.

#### 3. Trailheads and Neighborhood Access Points

- a. *Hobart Gate Trailhead*. Construct a regional trailhead/gravel parking lot that may accommodate as many as 50 cars and up to 20 horse trailers. The proposed trailhead is located off of 276<sup>th</sup> Ave. SE, south of the SR 18/Issaquah-Hobart Road Interchange. In addition to the parking area, there will be restrooms, an educational kiosk, and accessible/barrier free interpretive loop trails. One interpretive loop trail will concentrate on forest practices and management and the other loop trail will lead to Holder Creek and focus on the importance of streams, salmon, wetlands, and healthy watersheds. The trailhead kiosk will provide information and maps on the Taylor Mountain trail system. Additional area(s) will be set aside for enlarging the parking lot if public use increases enough to require it and if the trails can sustain an increased level of activity without resulting in significant adverse impacts to the under-lying natural resources.
- b. *Tiger Summit South Trailhead*. Construct a gravel parking lot/trailhead on the south side of SR 18 at Tiger Summit on Cascade Land Conservancy lands. The size of the trailhead shall be determined by topography and identified recreational user needs at the time of design. The location of this facility will be approved by Cascade Land Conservancy or subsequent landowner and abide to the trails conservation easement held by King County. Additionally, the agencies shall work with the Washington State Department of Transportation for the planning of this trailhead because of the proposed widening project for SR 18 and the potential for the construction of a "tight diamond" Interchange.
- c. *Rattlesnake Mountain Trailhead*. Parking for the northeast section of the planning area is planned at the proposed Snoqualmie Point/Rattlesnake Mountain Trailhead.
- d. Watershed Gate Trailhead. Parking off the road and along the shoulder will continue to be allowed along SE 208<sup>th</sup> Street (Kerriston Road) near what is called the "Watershed Gate". It is recommended that this area be monitored and if over time it is found parking is a safety issue, and the other Taylor Mountain parking areas are not meeting the needs for public use, the City of Seattle may investigate allowing construction of an additional parking area in this location. The Trails Committee will be consulted regarding this issue.
- e. *Neighborhood Access*. Additional access to the planning area occurs in several neighborhoods located adjacent to Taylor Mountain Forest. These sites will continue to provide access for local residents.
- f. *Gated Roads*. Several gated roads enter onto SR 18. Currently recreational users use the pull out area in front of the gate for parking. Work with the Washington State Department of Transportation regarding construction of trail access routes under the bridges at Holder Creek and the Raging River when SR 18 is improved.
- g. *Funding*. Funding for the trailheads and facilities will need to be from grant funding sources, since none of the land owners have funding available for construction of these facilities.

#### 4. Roads and Trails

- a. *Recreational Use on Trails and Roads*. Low-impact recreational use will be limited to trails and roads. No off-trail use shall be allowed.
- b. *View Assessment*. Existing trails with views will be documented and other locations investigated for views of Mount Rainier, Tiger Mountain, and the Olympic Mountains. The following trails have exceptional views: Mount Rainier View and Holder Knob Trails.
- c. Construct Trails to Agency Standards and the Primary Management Objective (PMO). Build and maintain the multiple and shared use trails to US Forest Service/WADNR trail standards for the primary management objective/user group or to the highest impact use on the trail (i.e., equestrian or mountain bicycle).
- d. *Day-Use Area Only*. Use is limited to daylight hours only (Day-Use Only); no overnight use or camping is allowed.
- e. Respect Private Property. All existing and proposed trail locations must respect private lands.
- f. *Trail Monitoring*. Conduct trail use monitoring after building, renovating, and/ or relocating trails. Note conditions of trails prior to implementation of use.

#### **Southwest Public Use Zone**

The following Management Recommendations are for the southwest planning area: Tiger Mountain Summit south across the Cascade Land Conservancy Lands and through Taylor Mountain Forest (King County lands) and a small portion of Cedar River Watershed (outside hydrologic boundary).

#### 1. Trails

- a. *Road to Trail Conversion*. As recommended in the Trails Assessment, convert the proposed roads to be inactivated into trails on Taylor Mountain Forest. Only the roads leading to the Cedar River Watershed, in areas that drain into the Cedar River will be permanently closed (Roads H and Q) (See Figure 3).
- b. *Trail Phasing*. Construct an environmental protective trail system in phases. Reroutes and renovations are recommended for the following:
  - 1) Holder Creek Loop Holder Ridge Trail (#2), Holder Knob Trail (new), and Holder Creek Trail (#23) approximately 6 miles.
  - 2) Extend Boot Trail to the north (replaces Trails #25 and #10).
  - 3) Carey Creek Loop Carey Creek Trail (#11), Mountain Beaver Trail, new Carey Creek crossing trail that connects to the Boot Trail (#18 and #4), Sherwood Trail (#13), and the Elk Ridge Trail (#19) on the Cedar River Watershed portion of the project approximately 5.5 miles.
  - 4)Beaver Pond Loop Mount Rainier View Trail (#14), Hermit Trail (#9), Road P, Knee knocker, Trail (#7 and #5, and road on CLC lands, #20), Beaver Pond Trail, Road A, and Sherwood trail (#13).
  - 5)Outer Loop Trail Holder Creek Trail (#23 and #22), CLC Roads, Road P, Hermit Trail, Mount Rainier View Trail, Elk Ridge Trail, Carey Creek Trail, Mountain Beaver Trail, Boot Trail and Holder Ridge Trail approximately 11 miles.
  - 6) Many combinations of roads and trails can provide additional routes.
- c. *Trail Closures*. Based on the Trails Assessment of the existing trail system, the following trails are recommended for closure: the canyon portion of Trail #4, Loop Trail #8, and the

- lower SR 18 Trail #10 on Taylor Mountain Forest due to environmental damage and steep slopes. The canyon portion has been closed, other trails will close only after new trails are constructed to replace the route.
- d. Cascade Land Conservancy Lands. Use existing roads on the Cascade Land Conservancy land and Trails #20 (Beaver Pond Trail) and #22 (continuation of the Holder Creek Trail) in order to provide trail route connections from the Watershed and Hobart gates to Tiger Mountain Summit (SR 18). If the CLC land comes into public ownership, further trail opportunities will be explored at that time.
- e. *Road Use Availability*. The forest roads located within the public lands are available to non-motorized recreational use year-round.

#### Northeast Public Use Zone

The following Management Recommendations are for the lands located in the Northeast Public Use Zone, from Tiger Mountain Summit on Tiger Mountain State Forest northeast to Snoqualmie Point.

#### 1. Trails

- a. *Tiger Summit to Snoqualmie Point Trail*. Design a trail with the primary management objective designated for mountain bicycles. The trail will start from the NW Timber Trail on Tiger Mountain, cross under SR 18 at the Raging River and continue up to Snoqualmie Point.
- b. *Road Use Availability*. The forest roads located within the public lands are available for recreational use year-round.
- c. *United Fruit Growers*. In the future and if acceptable to the underlying property owner, work with the land owner in order to locate trail routes northeast of Taylor Mountain.
- d. *US Forest Service (USFS) Managed Land*. Coordinate with the USFS to establish trail connections from Tiger Mountain State Forest to Snoqualmie Point and the Rattlesnake Mountain Scenic Area and other trails.

# **Trail and Trailhead Construction Phasing**

The following provides recommendations for the phasing or prioritization for constructing trails and trailheads in the planning area:

### 1. **Trail Phasing -** Construct a trail system in phases:

- a. Phase 1: Construct new trails and reroutes on Taylor Mountain and Cedar River Watershed property. This will include bridge construction for stream protection at all locations, Carey Creek Loop and Beaver Pond Loop.
- b. Phase 2: Plan and construct trailhead and facilities at "Hobart Gate" and Hobart Trail Loop.
- c. Phase 3: Construct trail between NW Timber Trail and Rattlesnake Mountain/Snoqualmie Point Trailhead.
- d. Phase 4: Plan and construct trailhead at Tiger Mountain Summit, if access across private property is established to the northeast or work with Washington State Department of Transportation (WSDOT) during the widening project for SR 18.

- 2. **Grant Funding -** Apply for grant funds to implement the Taylor Mountain Public Use Plan and Trails Assessment.
- 3. Cedar River Watershed Work with the City of Seattle Watershed Management Division in order to allow public access from the SE 208<sup>th</sup> Street gate to the southeast portion of Taylor Mountain Forest, as appropriate. This approximately 400-acre area is currently located outside the Cedar River Watershed's hydrologic boundary and could possibly support hiking and equestrian use. However, the City of Seattle Watershed Management Division is also reviewing whether the Taylor Diversion Ditch should be rerouted to the Cedar River, thus including this small area within the Cedar River hydrographic boundary. If the course of the Taylor Diversion Ditch is changed, the Elk Ridge Trail will need to be rerouted.
- 4. **Cascade Land Conservancy -** Coordinate with the Cascade Land Conservancy to allow public access across previously owned Weyerhaeuser lands in order to connect trails from the Taylor Mountain area to Tiger Mountain at the summit parking lot. This will involve changing the location of the existing trail easement in the forest conservation easement held by King County to a new location.
- 5. **United Fruit Growers -** Coordinate with United Fruit Growers to allow public access across their managed lands in order to provide a trail connection(s) from Tiger Summit to Rattlesnake Mountain.

#### **Cost Estimate**

Construction costs of the proposed trails and trail system are based on recent King County; US Forest Service, state Department of Natural Resources and Mountains to Sound Greenway Trust trail and trailhead construction projects. It is estimated that to implement the public use plan will cost approximately \$2.6 million. The cost is also based upon having consultants and contractors do the work. Implementation is planned over a 10-year period and would include new trails, bridges over creeks and rivers, rerouting existing trails, maintenance of trails to bring them up to excellent trail standards, three new trailheads, and two interpretive trail loops. This will provide 21 miles of trails and 19 miles of roads in the planning area.

Using agency staff and organization's volunteer programs to complete the trail work could significantly reduce this estimated cost. King County, WADNR and the City of Seattle – Cedar River Watershed currently partner with trail organizations through their volunteer programs to build and maintain trails. The agencies have partnered with the Washington Backcountry Horsemen, Washington Trails Association, Mountains to Sound Greenway Trust, Backcountry Bicycle Trails Club and the Issaquah Alps Trails Club to build and maintain trails along the Mountains to Sound Greenway/I-90 corridor. By using our partners and their resources (e.g., volunteer programs), the cost for implementing the public use plan could be reduced from 33% to 50%. As a result, this could reduce the over cost of implementing the plan to from \$1.3 to \$1.6 million.

# **Land Management Considerations**

It is important that management of the planning area continue under the existing agency approved stewardship and management plans. These plans include management prescriptions for working forests and provide protection for natural resources across Washington State

Department of Natural Resources, King County Department of Natural Resources and Parks, and the Cascade Land Conservancy lands.

### 1. Land Management Recommendations

- a. *Forest Management Practices*. Public use shall accommodate and is secondary to forest management practices.
- b. Low-impact Recreational Opportunities. Accommodate low-impact recreational opportunities for the public, while preserving the site's ecological, fish and wildlife, forestry and water quality values.

### 2. Forest Management Activities

- a. *Temporary Trail Closures*. To accommodate forest management practices, temporary trail closures will be required for public safety during timber harvests.
- b. *Trail Restoration*. Trail segments damaged by forestry operations will be restored by the timber harvesting company.
- **c.** *Timber Sales*. A notification system and educational materials will be provided to the recreational users regarding each timber sale.

#### 3. Environmental Protection.

- a. *Sensitive Resources*. Constraints to recreational development and public use are primarily environmental: the site contains steep slopes, highly erosive soils, streams, and wetlands. These constraints limit the suitability of the site for trails.
- b. *Trail Use*. Allow only trail activities that are consistent with the goals, regulations and policies to protect ecological and working forest from degradation.
- c. *Trail Maintenance and Potential Closures*. Conduct trails maintenance by upgrading, relocating and/or maintaining selected trails. Abandon or close trails identified in the plan that contribute to ecological damage.
- d. *Volunteer Coordination*. Continue to work with the Friends of Taylor Mountain, Tahoma Chapter of the Backcountry Horsemen, Issaquah Alps Trail Club, Volunteers for Outdoor Washington, Backcountry Bicycle Trails Club, Washington Trails Association, and Mountains to Sound Greenway Trust regarding public use issues and helping with volunteer trail maintenance work for the protection of the ecological health of the site.
- e. *Water Quality*. The City of Seattle is required to protect the quality of the drinking water within the hydrographic boundary of the municipal Cedar River Watershed. If access outlined in this plan is determined by the City of Seattle to be negatively impacting the water supply (whether through increased incident of trepass or changes in water supply sources), the City may close all its properties to public access.

# Part V – Concept Map and Action Plan

# **Concept Map**

The Public Use Concept Map is used as a tool to help visualize the public use recommendations proposed in this plan. The map shows the proposed Public Use Zones and the proposed locations of trails, reroutes, trail connections, road-to-trail conversions, trail closures, road closures, trailheads, and broad locations of potential trail routes and connectors. Some of the potential trail routes and connectors cross private property and cannot be built or used until a public access easement is obtained or the property acquired by a public entity. See the Public Use Concept Map – Figure 3.

### **Action Plan**

An Action Plan matrix was created to implement the recommendations contained within Part IV – Public Use Recommendations and to be used as a guide for phasing and prioritizing projects. The Action Plan is a compilation of the public use recommendations, plus priorities for implementation and the resources necessary to construct the projects.

# **Priority for Implementation**

Priorities for implementation are categorized into four levels of need. Level A being the most crucial to implement and Level D being the least crucial.

**Level A** – Identifies the most critical basic needs. Actions are targeted at addressing ongoing concerns with either resource damage or social conflicts. These action items are the foundation tasks in which to implement the public use plan.

**Level B** – Identifies actions needed that may take more time to implement and are less crucial to time constraints than Level A.

**Level C** – Identifies actions that must be taken to complete that are even less crucial to time constraints or where public use easements must be completed in order to construct the recreational use facility or trail.

**Level D** – Identifies the final actions needed to complete the Public Use Plan.

#### **Action Plan Matrix**

Pul	blic Use Recommendations-	Priority	Resources Required
Ste	wardship		
1.	Implement the Public Use Zones as defined.	A	Proj. Program Mgr;
2.	Provide Trail Etiquette for the sharing of multip	le A	Resource Coordinator
	use trails.		Public Use Forester;
3.	Seasonal closure of trails.	A	Volunteer Coordina-
4.	Volunteer coordination for trail construction and	d A	tor; Education
	and maintenance activities.		Specialist.
5.	Preservation of cultural and historic resources.	A	

6.	Provide opportunities for Environmental Education	В	
7.	Trails Committee* – work with the recreational users to achieve trail and stewardship goals.	A	
8.	Monitor trail use and conflicts.	A	
9.	Pets must be on leash or under voice control.	A	
	Hunting and fishing subject to agency rules	A	
10.	and regulations	11	
*T	<ul> <li>Trails Committee – Member Agencies and Organizat</li> <li>King County Department of Natural Resources a</li> <li>Washington State Department of Natural Resource</li> <li>City of Seattle – Seattle Public Utilities, Watersh</li> <li>Cascade Land Conservancy</li> <li>Mountains to Sound Greenway Trust</li> <li>Washington Backcountry Horsemen – Tahoma C</li> <li>Backcountry Bicycle Trails Club</li> <li>Washington Trails Association</li> <li>Issaquah Alps Trails Club</li> </ul>	nd Parks ces ed Manage	ment Division
Ent	forcement		
1.	Trails Rules and Regulations (Trail Etiquette).	A	Enforcement Officer;
2.	Volunteer Rangers/Park Ambassadors.	A	Resource Coordinator
3.	Key rules: Day-use area, no motorized use,		Public Use Forester
	pets on leash or under voice control, stay on trails.	A	
4.	Law enforcement – increase enforcement as		
	necessary and as the plan is implemented.	В	
Pul	blic Use Recommendations-		
Tra	ailheads		
1.	Hobart Gate Trailhead	В	Proj. Program Mgr.
	a. Grant for planning of trailhead.		Interagency Coor-
	b. Design the trailhead.		dinator; Parks
	c. Grant for construction of the trailhead.		Planner; Landscape
	d. Contract to construct the trailhead.		Architect
2.	Tiger Summit South Trailhead	C	
	a. Grant for planning of trailhead.		
	b. Design the trailhead.		
	c. Grant for construction.		
	d. Contract for construction of the trailhead.		
3.	Rattlesnake Mountain/Snoqualmie Point Trailhead	<u>l</u> A	
	a. Design of Trailhead.		
	b. Grant for construction.	C	
4.	"Watershed Gate" – 10 West	C	
5.	Other Access Points	С	

- a. Neighborhood Access Points.
- b. Gated Roads.

# **Public Use Recommendations- Roads**

Ruaus		
1. Selected roads should be decommissioned.	Α	Foresters;
2. Road-to-Trail Conversions.	В	Public Use Forester;
3. Identify forestry roads/use as trail routes when no	A	Resource Coordinator
timber harvests are occurring.		
4. Prohibit all non-authorized motorized use on	A	
the roads (and trails).		

# Public Use Recommendations Trails Conoral

Trails – General		
1. The multiple use trails located in the Northeast	A	Proj. Program Mgr;
Primary Use Zone have a primary management		Public Use Forester;
objective (PMO) for mountain bicycle use.		Resource Coordinator
Equestrians and hikers can also use the trails.		
2. The multiple use trails located in the Southwest	A	
Primary Use Zone have a primary management		
objective (PMO) for equestrian use. Mountain		
bicyclists and hikers can also use the trails.		

- 3. The shared use trails located in the Southwest A Primary Use Zone Cedar River Watershed have a PMO for equestrian use. Hikers can also use the trail.

  4. All existing and proposed trail locations should.
- 4. All existing and proposed trail locations should A respect private and public lands. Unauthorized use or access is not allowed.
- 5. Conduct trail monitoring after building or renovating trails.
- 6. Maintain the trails to existing agency trail standards. A
- 7. Encourage volunteers to obtain training for the maintenance of trails.

### **Public Use Recommendations Trails – Specific**

I		
1. Continue Boot Trail to replace existing trail	A	Proj. Program Mgr.
2. Construct bridges over Carey and Holder Creeks	A	Resource Coordinator
3. Construct Mountain Beaver Trail	A	Public Use Forester
4. Reroute and maintain Holder Creek Trail	A	Interagency Coor-
5. Reroute and maintain Elk Ridge Trail	A	dinator (grants).
6. Reroute Holder Ridge Trail	A	
7. Reroute and maintain Hermit and Knee knocker	В	
8. Reroute and maintain Carey Creek Connector	В	
9. Construct new Holder Knob Trail	C	

Public Use Recommendations		
Trails – New Trails  1. Manage, construct and maintain the trails	A	Proj. Program Mgr.;
identified in the Concept Map.	Λ	Resource Coordinator
2. Determine trail accessibility from Tiger Summit to Rattlesnake Mountain//Snoqualmie Point.	A	Public Use Forester; Interagency Coor-
3. Investigate property acquisitions and access easements with private property owners for a trail corridor from Tiger Summit to Rattlesnake Mountain//Snoqualmie Point and additional trails from Taylor Mountain Forest to Tiger Summit.	A	dinator
<ul><li>4. Use an evaluation chart to evaluate potential new trails in the future.</li></ul>	С	
Public Use Recommendations Pets		
1. Pets are only allowed on trails and roads.	A	Public Use Forester
Pets must be on leash or under voice control		Enforcement Officer;
at all times. Educate users and post signs.		Resource Coordinator
Public Use Recommendations Hunting and Fishing		
1. Firearms are prohibited in the City of Seattle – Watershed Management Division's Cedar River Watershed and King County's Taylor Mountain Forest.	A	WA Fish & Wildlife; Enforcement Officer; Resource Coordinator
<ul><li>2. Hunting at Tiger Mountain State Forest is regulated by the Washington State Department of Fish and Wildlife.</li></ul>	A	
3. Fishing is regulated by the Washington State Dept.	A	
of Fish and Wildlife throughout the planning area.		
Public Use Recommendations		
Harvesting and Collecting 1. Harvesting of small amounts of berries, mosses,	A	WADNR Forester;
mushrooms and other collection of natural materials is allowed for personal use at Tiger Mountain State Forest.	71	Enforcement Officer
<ol> <li>Harvesting of berries, mosses, mushrooms and         Other natural materials is prohibited in the City of         Seattle – Cedar River Watershed and King County         Taylor Mountain Forest.</li> </ol>	A	

### **Public Use Recommendations Public Information and Environmental Education**

- 1. Develop an official publication (map or brochure) for public use within the Taylor Mountain area. Make the information or publication available at appropriate distribution sites such as at the trailheads and the US Forest Service Visitor Information Center. Provide a trail etiquette brochure.
- 2. Develop an education theme that integrates the natural, historical, cultural features of the Taylor Mountain area.
  - a. Identify and develop education focus areas at the Hobart Gate and Tiger Summit Trailheads and at other appropriate access points into the Taylor Mountain area.
  - b. Identify appropriate interpretive trails that complement the education focus at the trailheads, include natural, historical and cultural information.

- В KC DNR & Parks; WADNR; Education Have
- Specialist; Resource В Coordinator Public Use Forester

C

# **Public Use Recommendations** Acquisition

- 1. Explore opportunities to acquire lands within the Raging River Basin, between Rattlesnake, Tiger and Taylor Mountains.
- 2. Explore opportunities to acquire public access/trail easements within the Raging River Basin in order to promote trail access between Rattlesnake, Tiger and Taylor Mountains.
- 3. Explore opportunities to acquire public access/trail easements along Carey Creek Trail to connect to SE 204<sup>th</sup> Street
- A WADNR – Asset Manager; Public Use Forester:
- Proj. Program Mgr. Α
- В KC DNR

### **Public Use Recommendations** Monitoring

- 1. Prioritize monitoring efforts on areas and trails that may exceed limits of acceptable change.
- 2. Monitor for changes in level and type of public use on the multiple and shared use trails.
- 3. Monitor areas before and after trail construction or renovation for impacts to wildlife and vegetation.
- 4. Take "before" photos of newly constructed and renovated trails in order to have a basis for monitoring trail impacts and conditions.
- Α Proj. Program Mgr.; Resource Coordinator
- Public Use Forester A
- Α

В

Taylor Mountain Trails – Capital Improvement Projects

Trail Loop/ Section	Trail Name	Trail Length (ft)	Trail #	Estimated Cost (\$)	Land Manager	Primary Mgt. Objective (PM	Notes O)
Holder Creek Loop	1) Holder Ridge	4,396		\$82,322	KC - DNRP	Equestrian (E)	Reroute of existing Trail #2
5.9 miles	2) Holder Knob	15,518		\$389,136	KC - DNRP	Е	New trail in three sections
Use 0.6 mile of road to	3) Holder Creek	7,856	23	\$209,238	KC - DNRP	E and Hiker(H) only	Needs bridge and reroutes
connect loop	Holder Creek to Beaver Pond	2,222	22	\$5,915	CLC	E	
Carey Creek Loop	1) Elk Ridge	7,471	19	\$86,045	City of Seattle KC - DNRP	E and H only	Needs stream crossing and reroutes
5.6 miles	2) Sherwood	1,636	13	\$45,528	KC - DNRP	E and H only	Needs drainage
Use 1.6 miles	3) Boot	3,279	4 and 18		KC - DNRP	E	Loop portion of Boot trail
of road to connect loop	(new section)	2,746	25	\$50,667	KC - DNRP	E	This new route leads to Road A
	4) Mt. Beaver	2,985		\$83,765	KC - DNRP	E	Trail provides Carey Creek Crossing
	5) Carey Creek	9,144	11	\$92,373	KC - DNRP City of Seattle	E and H only	Western part of trail is not in loop
	Carey Creek Connector	2,967	26	\$46,462	KC - DNRP	E	Local neighborhood trail - SE 298th
Beaver Pond Loop 4.4 miles	Beaver Pond and Road A	2,742	20	\$57,929	CLC KC - DNRP	E E	Trail is old logging road Road A with remain open
	2) CLC Roads	5,257			CLC	E	Logging road connects trails to make a loop
	3) Kneeknocker	5,622		\$123,834	KC - DNRP CLC	Е	Reroute and new trail
	4) Hermit Use Sherwood tra	3,058 il to complete l	9 oop.	\$36,775	KC - DNRP	E	reroute wet and steep areas

Trail Loop/ Section	Trail Name	Trail Length (ft)	Trail #	Estimated Cost (\$)	Land Manager	Primary User Group(s)	Notes
<b>Tiger Summit</b> 1.7 miles	CLC road from Beaver Pond	8,965			CLC	E and H	Road provides trail to Tiger Summit
Tiger Mountain Summit to Raging River	1) NW Timber Connector	2,696		\$36,664	WADNR	Mt. Biker (B)	Starts trail from existing NW Timber
Crossing 2.1 miles	2) Abandoned Road to Deep Ck	3,819		\$51,811	WADNR	В	Old road and new trail
	3) Deep Creek to Hwy 18 pullout	1,160		\$29,910	WADNR	В	new trail
	4) Hwy 18 pullout to Raging River	3,417		\$37,499	WADNR	В	new trail
Raging River to Snoqualmie Point 5 miles	Use old logging roads and new trails	5 miles		\$350,000	WADNR USFS	В	Requires bridge across the Raging River Additional trail planning will occur if trail easement is acquired on additional lands
	Estimated Total C	ost		\$1,826,353			
	Estimated Cost	KC - DNRP		\$1,125,000			
	by Land Manager	WADNR City of Seatt CLC	le	\$525,000 \$100,000 \$75,000			

### Part VI - Trails Assessment

The trails assessment was completed between November 2003 and June 2004. King County Parks staff members, Jack Simonson and Dan Perzynski completed it. The first step was to characterize the existing trails; than to identify trails to close; locate needed trail reroutes; or, provides a new trail route.

#### **Methods**

Initially the assessment was completed by walking the existing trails with a measuring wheel, a clinometer, and a tape measure. The length of the trail; the width of the tread; the length of trail structures; and if on an old road or railroad grade, the width of the bed were noted. Assessment of the tread condition included its firmness, degree of erosion, and impediments, such as cobbles or mud were noted. Muddy sections and standing water on the trail were measured in length and width. All grade levels, 10 percent or greater, in the trail's slope were noted with a clinometer and wheel.

Since the preservation and enhancement of good water quality is the primary goal of the Taylor Mt. Forest Stewardship Plan, special attention was paid to the trail's proximity to wetlands and streams and the impact the trail could have upon them. The approaches leading into the creek and the condition of the streambed were noted as were the degree of siltation caused by the lack of drainage structures and the steepness of the slope. A lack of the ability to retain the soil in its tread and a close proximity was grounds for a trail to be closed and a reroute established elsewhere.

The existing road and trail system on Taylor Mt. Forest makes it difficult to start fresh with development of a trail system. The road system on Taylor Mountain was laid out for a housing development, with wide graveled roads. The entire road system must therefore be incorporated into the trail system and it is not always a smooth transition. Changing from road to trail and back again makes signing difficult. Some roads end in cul-de-sacs with no apparent destination. A trail often crosses several roads, needing to use the road for a distance in some spots. Couple this with a steep terrain and numerous wetlands and it makes for a confusing trails system. Constructing additional trails parallel to a road is redundant. The existing density of trails is considered high for the size of the area. Similar issues are found on Tiger and Rattlesnake Mountains.

Construction costs were based on past King County Park projects, recent Forest Service construction projects provided by Kathy White, and proposed Mountains to Sound Greenway Projects by Mike Stenger.

#### **Results**

The existing trails are all described in the following section. These reports include the percentage of the trail's slope over a 15% grade, and a rating of the trail's general condition. Trails that had a high percentage of its length at grades over 15% and/or had the potential to adversely affect water quality were considered for trail reroutes, completely; rerouted to another nearby location, and if no other option available, closed. Trails were also recommended for closure if there were

other trails in the same area and they all had common destination. After each trail description is a trail log if the trail is to be reconstructed. A cost estimate was prepared for each trail report.

#### **Reroutes and New Trails**

Reroutes were laid out with the intention of providing a grade comfortable for all intended users; provide good drainage along the entire route; minimize the risk of erosion; protect water quality throughout the corridor; and, add some visual variety, if possible. Grades were kept to 15 percent, and preferably 10 percent, or less. Switchbacks were laid out at around a 12 percent grade, low enough to prevent erosion yet steep enough to deter user shortcutting. Whenever possible the proposed route was laid out on a side slope rather than directly uphill or in a flat area. With this design water will not erode the trail or cause it to puddle but instead would have the ability to easily drain quickly to lower ground. Stream crossings were avoided, and if that wasn't possible, crossings were selected where the approaches on both banks were at a moderate grade and the streambed at the crossing was flat and had a firm rocky base or bridges were proposed. Wetland areas were avoided by a good distance whenever possible, and if that couldn't be accomplished, trails skirted around on one side of the wetland. In order to add a visual variety to the endless alder forest, routes were selected that passed through older coniferous forest or where the canopy opened up for a view of the surrounding countryside.

The proposed Tiger and Rattlesnake reroutes are to be away from beneath the powerlines as much as possible. They will minimize impacts upon wetlands and streams. If trail easements are acquired on additional lands in the area, trail planning will look for a trail route from the Raging River to Snoqualmie Point.

Reroutes were laid out with a clinometer. An altimeter, compass, and topographic map were also used to plot rough locations of the trail route. After the reroutes were located, a Trimble global positioning unit was used to map the reroute. Special structures were noted such as switchback locations, viewpoints or tall conifer stands. Arc View and Park View programs were used to determine the distance of the reroutes and to construct maps of the proposed routes. Existing trails where the measuring wheel was used are much more precise than the proposed reroutes made with the GPS unit.